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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/054,986	04/03/1998	MARK W. STAVNES	SC-5285	3346

7590 04/09/2003

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EXAMINER

NOLAN, SANDRA M

ART UNIT	PAPER NUMBER
1772	22

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/054,986	STAVNES ET AL.	
	Examiner	Art Unit	
	Sandra M. Nolan	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 February 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 24-26,36 and 39 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 24-26,36 and 39 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 21 February 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) Interview Summary (PTO-413) Paper No(s) _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

Claims

1. Claims 24-26, 36 and 39 are pending.

Drawings

2. The corrected or substitute drawings were received on 21 February 2003 (in Paper No. 21). These drawings are acceptable to the USPTO Draftsperson.

Objection Withdrawn

3. The objection to Figure 3 set forth in sections 4 through 6 of the 15 November 2002 office action (Paper No. 20) is hereby withdrawn in view of the arguments submitted in Paper No. 21.

The examiner notes, however, that Figure 3 does not depict products made using the processes of claims 36 or 39 because no "suitable uniformity" is shown (per claim 36, line 9). Applicants have made this clear on page 6 of Paper No. 21, where they assert that Figure 3 shows what happens with the uniformity of the bore is not suitable.

Rejections Maintained

K 4. The 35 USC 103 rejection of claims 24-26, as unpatentable over Brown et al (US 5,975,145) in view of Tobin (US 4,349,803), as repeated in section 7 of the 15 November 2002 office action (Paper No. 20), is maintained for reasons of record.

W 5. The 35 USC 103 rejection of claims 36 and 39, as stated in section 8 of Paper No. 20, is maintained for reasons of record.

W 6. The 35 USC 112 rejection of claims 36 and 39 for indefiniteness, as restated in section 9 of Paper No. 20, is maintained for reasons of record.

Response to Arguments

7. Applicant's arguments filed in Paper No. 21 have been fully considered but they are not persuasive.

On page 5, in the second paragraph, of Paper No. 21, applicants ask why one skilled in the art would look to Tobin's teaching of woven or wound boundary layer in a molded tube when practicing the Brown et al winding approach.

However, the answer to applicants' question is simple. Both Tobin and Brown deal with winding techniques.

In the same paragraph, applicants state that "it is not clear how the molded fuse tube of Tobin suggests the use of melamine in the inner wound layer of the Brown et al reference."

However, the use of melamine as a "preferred" arc-extinguishing material is taught at col. 4, lines 14-21 of Tobin. Such a teaching clearly suggests melamine's use in any product in which arc-quenching is desired. Since Brown makes arc-quenching fuse tubes (Note its title.), the use of melamine in making them is suggested by Tobin.

Applicants argue, in the paragraph bridging pages 5 and 6 of Paper No. 21, that the method of claims 36 and 39 is patentable because the winding of a first fiber in 1+ non-overlapping passes and the forming of a predetermined taper in the fuse tube, with the taper defining the minimum wall thickness is not suggested by the combination of Brown and Schmunk

However, the use of non-overlapping windings is suggested by col. 11, lines 21-22 of Brown, where “single layer construction” is taught. Since a single layer has no overlap, the non-overlapping feature of claims 36 and 39 is suggested by Brown.

The provision of a tapered fuse tube is clearly suggested by Schmunk, which teaches that tapering obviates stagnation of gases and clogging of the bore (see Schmunk's abstract).

The fact that the taper is a function of the wall thickness is inherent, since the taper, or angle, of the bore in the fuse tube is related to varying thicknesses at various points along the tube (see Figure 5 of Schmunk).

The examiner notes that applicants did not present any arguments concerning the propriety of the 35 USC 112 rejection of claims 36 and 39 in Paper No. 21.

Accordingly, no comment will be made here regarding that rejection.

Final Rejection

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication should be directed to the Examiner, Sandra M. Nolan, whose telephone number is 703/308-9545. The Examiner can normally be reached on Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time.

If attempts to reach the Examiner by telephone are unsuccessful, her supervisor, Harold Pyon, can be reached at 703/308-4251. The general fax number for the art unit is 703/305-5436. The fax number for after final communications is 703/872-9310. The receptionist answers 703/308-0661.

S. M. Nolan
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Patent Examiner
Technology Center 1700

SMN/smn
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